

FULBRIGHT & JAWORSKI L.L.P.
A REGISTERED LIMITED LIABILITY PARTNERSHIP
555 SOUTH FLOWER STREET
FORTY-FIRST FLOOR
LOS ANGELES, CALIFORNIA 90071
WWW.FULBRIGHT.COM

RECEIVED
CENTRAL FAX CENTER

SEP 21 2006

FACSIMILE TRANSMISSION

DATE: September 21, 2006

MATTER NUMBER: 13688 10416320

RECIPIENT(S):	FAX NO.:	PHONE NO.:
OFFICE OF INITIAL PATENT EXAMINATION	571-273-8300	800-786-9199
UNITED STATES PATENT & TRADEMARK OFFICE		

FROM: Cristene Amador

FLOOR: 40

PHONE: (213) 892-9252

FAX: (213) 892-9494

RE: CORRECTION TO LIST OF INVENTORS

NUMBER OF PAGES INCLUDING COVER PAGE: 8 Originals Will Not Follow

MESSAGE:

Submitted herewith for filing are the following documents:

- Red-lined Filing Receipt
- Declaration showing order of inventors
- Copy of WO 03/106679 A1 showing order of inventors

Please provide an updated Filing Receipt for our files.

Thank you for your help with this matter.

CAUTION - CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS FACSIMILE IS CONFIDENTIAL AND MAY ALSO CONTAIN PRIVILEGED ATTORNEY-CLIENT INFORMATION OR WORK PRODUCT. THE INFORMATION IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHOM IT IS ADDRESSED. IF YOU ARE NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE TO DELIVER IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY USE, DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THE FACSIMILE IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE, AND RETURN THE ORIGINAL MESSAGE TO US AT THE ADDRESS ABOVE VIA THE U.S. POSTAL SERVICE. THANK YOU.

IF YOU DO NOT RECEIVE ALL OF THE PAGES, PLEASE CALL
CRISTENE AMADOR AT 213-892-9252 AS SOON AS POSSIBLE.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Andrew COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE RECD	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/518,174	06/28/2005	1645	1230	LA-7645-101US	5	24	1

CONFIRMATION NO. 5721

000167
 FULBRIGHT AND JAWORSKI LLP
 555 S. FLOWER STREET, 41ST FLOOR
 LOS ANGELES, CA 90071

FILING RECEIPT



OC000000020159711

Date Mailed: 08/24/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Anna Victoria Hine, Worcestershire, UNITED KINGDOM;
 ↗ David Andrew Nagel, Rugby, UNITED KINGDOM;
 ↗ Marcus Daniel Hughes, West Midlands, UNITED KINGDOM;
 Zhan-Ren Zhang, Consett, UNITED KINGDOM;
 Mohammed Ashraf, Birmingham, UNITED KINGDOM;
 Andrew James Sutherland, Worcestershire, UNITED KINGDOM;
 Albert Francis Santos, Cardiff, UNITED KINGDOM;

FULBRIGHT & JAWORSKI, LLP
 IPT DOCKETING
 Docketed Not Req'd Confirmation
 Initials 1st _____ Initials 2nd _____

Power of Attorney:

Robert Berliner--20121

SEP - 1 2006

Attorney _____

Docket No. _____
 Action Req'd _____ Date Due _____

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/GB03/02573 06/13/2003

Foreign Applications

UNITED KINGDOM 0213816.2 06/14/2002

If Required, Foreign Filing License Granted: 08/23/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/518,174**

Projected Publication Date: 11/30/2006

Non-Publication Request: No

RECEIVED
CENTRAL FAX CENTER

SEP 21 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECLARATION FOR PATENT APPLICATION

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHODS OF PRODUCING DNA AND PROTEIN LIBRARIES

the specification of which was filed on as Application No. 10/518174

In the event that the filing date and/or Application No. are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request my attorneys/agent(s) at Fulbright & Jaworski L.L.P., 865 South Figueroa, Twenty-Ninth Floor, Los Angeles, California 90017-2571, to insert above the filing date and/or Application No. of said application.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to herein.

I acknowledge the duty to disclose all information known to me that is material to patentability in accordance with Title 37, Code of Federal Regulations, § 1.56.

FOREIGN PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

- no such foreign applications have been filed
- such foreign application have been filed as follows:

Attorney Docket No.:

**EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

Application Number	Country	Date of Filing	Priority Claimed Under 35 USC 119
0213816.2	GB	14 June 2002	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
GB2003/002573	PCT	13 June 2003	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

**ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

Application Number	Country	Date of Filing

CLAIM FOR BENEFIT OF EARLIER U.S. PROVISIONAL APPLICATIONS

I hereby claim priority benefits under Title 35, United States Code §119(e), of any United States provisional patent application(s) listed below:

- no such U.S. provisional applications have been filed.
- such U.S. provisional application have been filed as follows:

Application Number	Date of Filing	Priority Claimed Under 35 USC 119
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of the United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all information that is material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56 which became available to me between the filing date of the prior application and the national or PCT international filing date of this application:

Attorney Docket No.:

- no such U.S./PCT applications have been filed.
- such U.S./PCT application have been filed as follows:

Application Number	Date of Filing	Status (Patented/Pending/Abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint:

Robert Berliner	20,121	John D. McConaghay	26,773	Conrad R. Solum, Jr.	20,467
M. John Carson	25,090	David M. Morse	50,505	Gregory B. Wood	28,133
Margaret A. Churchill	39,944	Billy A. Robbins	18,313	Miles Yamanaka	45,665
John M. May	26,200	Terri L. Sale	45,066		

all of **Fulbright & Jaworski L.L.P.**, 865 South Figueroa, Twenty-Ninth Floor, Los Angeles, California 90017-2571, jointly, and each of them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the U. S. Patent and Trademark Office connected therewith.

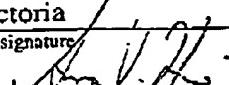
Please mail all correspondence to Robert Berliner, whose address is:

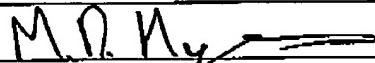
Fulbright & Jaworski L.L.P.
865 South Figueroa
Twenty-Ninth Floor
Los Angeles, California 90017-2571

Please direct telephone calls to: Robert Berliner at (213) 892-9237.

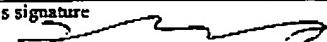
Please direct facsimiles to: (213) 680-4518

Attorney Docket No.:

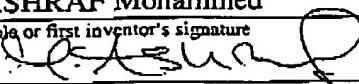
Full name of sole or first inventor HINE Anna Victoria	
Sole or first inventor's signature 	Date 25/4/05
Residence Worcestershire, United Kingdom	
Citizenship British	
Mailing Address Bracebridge House, 139 Chester Road South, Kidderminster, Worcestershire DY10 1XB, United Kingdom	

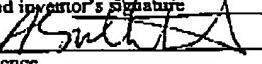
Full name of second inventor, if any HUGHES Marcus Daniel	
Second inventor's signature 	Date 25/4/05
Residence West Midlands, United Kingdom	
Citizenship British	
Mailing Address 90 Halesowen Road, Cradley Heath, West Midlands, B64 5LU, United Kingdom	

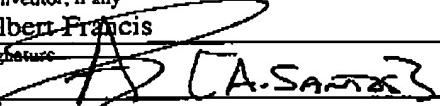
Full name of third inventor, if any NAGEL David Andrew	
Third inventor's signature 	Date 23/5/05
Residence Rugby Tamworth, United Kingdom	
Citizenship British	
Mailing Address 63 FLEET CRESCENT, RUGBY, WARWS, CV21 4BC, United Kingdom 41 Coventry Road, Kingsbury, Tamworth, B78 2LW, United Kingdom	

Full name of fourth inventor, if any ZHANG, Zhan-Ren	
Fourth inventor's signature 	Date 25/5/05
Residence Consett Birmingham, United Kingdom	
Citizenship Chinese	
Mailing Address 11 TAYLOR ST., CONSETT, CO. DURHAM, DH8 5RQ, United Kingdom. 81 Greenoak Crescent, Birmingham, B30 2TD, United Kingdom	

Attorney Docket No.:

Full name of sole or first inventor ASHRAF Mohammed	
Sole or first inventor's signature 	Date 27/04/05
Residence Birmingham, United Kingdom	
Citizenship British	
Mailing Address 42 Ellesmere Road, Birmingham, B8 1NG, United Kingdom	

Full name of second inventor, if any SUTHERLAND Andrew James	
Second inventor's signature 	Date 27/4/5
Residence Worcestershire, United Kingdom	
Citizenship British	
Mailing Address Bracebridge House, 139 Chester Road South, Kidderminster, Worcestershire, DY10 1XB	

Full name of third inventor, if any SANTOS, Albert Francis	
Third inventor's signature 	Date 26th May 2005
Residence Cardiff, United Kingdom	
Citizenship British	
Mailing Address Llwynelyn, Cefn Bychan, Pentrech, Cardiff, CF15 9PG, United Kingdom	

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number
WO 03/106679 A1

(51) International Patent Classification⁷: C12N 15/10

(21) International Application Number: PCT/GB03/02573

(22) International Filing Date: 13 June 2003 (13.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0213816.2 14 June 2002 (14.06.2002) GB

(71) Applicant (for all designated States except US): ASTON
UNIVERSITY [GB/GB]; Aston Triangle, Birmingham B4
7ET (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HINE, Anna,
Victoria [GB/GB]; Bracebridge House, 139 Chester
Road South, Kidderminster, Worcestershire DY10 1XB

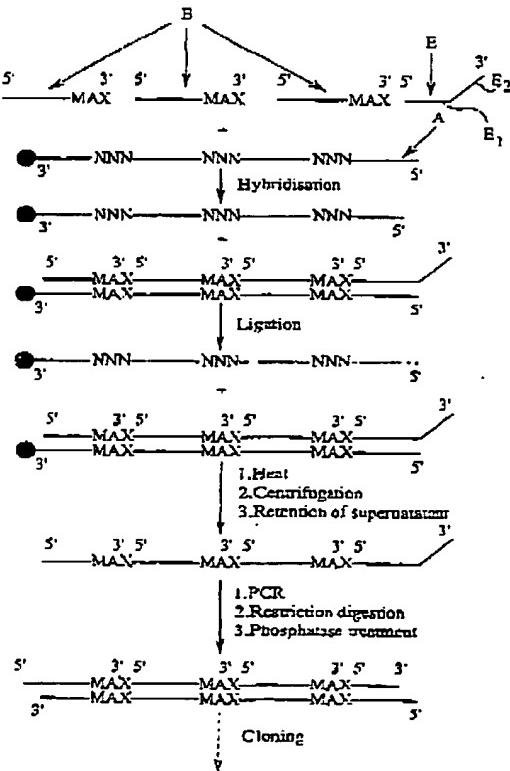
(GB). HUGHES, Marcus, Daniel [GB/GB]; 90 Hale-
sowen Road, Cradley Heath, West Midlands, B64 5LU
(GB). NAGEL, David, Andrew [GB/GB]; 41 Coventry
Road, Kingsbury, Tamworth, B78 2LW (GB). ZHANG,
Zhan-Ren [CN/GB]; 81 Greenoak Crescent, Birmingham.
B30 2TD (GB). ASHRAF, Mohammed [GB/GB]; 42
Ellesmere Road, Birmingham, B8 1NG (GB). SUTHER-
LAND, Andrew, James [GB/GB]; Bracebridge House,
139 Chester Road South, Kidderminster, Worcestershire
DY10 1XB (GB). SANTOS, Albert, Francis [GB/GB];
Llywyncelyn, Cain Bychan, Penyrrch, Cardiff CF15 9PG
(GB).

(74) Agent: WARD, David, I.: Marks & Clerk, Alpha Tower,
Suffolk Street Queensway, Birmingham B1 1TT (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

[Continued on next page]

(54) Title: METHODS OF PRODUCING DNA AND PROTEIN LIBRARIES



(57) Abstract: The present invention provides a method of producing a DNA library comprising a plurality of DNA sequences of interest, where each DNA sequence of interest has at least two predetermined positions, with at each predetermined position a codon (MAX) selected from a defined group for that position, the codons within a group coding for different amino acids. The method comprising the steps of: - (i) contacting so as to effect hybridisation (a) template DNA (A) comprising said at least two predetermined positions, said template DNA being fully randomised at said at least two predetermined positions (NNN), (b) for each predetermined position, a selection oligonucleotide pool, each selection oligonucleotide (B) within each pool comprising a codon (MAX) selected from the defined group for that predetermined position, and (c) at least one additional oligonucleotide sequence (E) comprising a region (E₂) which is non-hybridisable to the template DNA, (ii) ligating the hybridised DNA sequences (B, E), (iii) denaturing the product of step (ii) so as to give a mixed population of said template DNA (A) and said DNA sequences of interest, and (iv) selectively amplifying the DNA sequences of interest. The additional oligonucleotide sequence (E) of step (i) is selected such that after step (ii) the non-hybridisable region (E₂) is located externally of the template DNA (A). The invention also provides protein and DNA libraries which can be produced by the method of the invention.

WO 03/106679 A1